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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,779	08/18/2003	Robert O. James	86721CEB	3720

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EXAMINER

LE, HOA T

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

10/642,779

Applicant(s)

JAMES ET AL

Examiner

H. T. Le

Art Unit

1773

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>Aug. '03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 10 is objected to because of the following misspellings: “fluopolymer” and “silsequinoxane”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. Claims 2-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2-16 are meaningless because it is unclear whether their subject matter is a product or a process. The preamble “the method” has no antecedent basis.

In claim 2, “steps of providing... and coating” has no antecedent basis.

In claim 2, the definition of “temperature-sensitive optical vector” appears to conflict with the definition in the specification. As described in the specification, “temperature-sensitive optical vector” is an optical function of temperature (i.e. optical factors that are varied with temperature). However, claim 2 defines “temperature-sensitive optical vector” as a refractive index that is independent from temperature changes. Correction or explanation is required.

In claim 3, “said step of dispersing” and “said polymethylmethacrylate” have no antecedent basis.

In claim 4, “said step of coating” and “said polymethylmethacrylate” have no antecedent basis.

In claim 5, "said step of providing" has no antecedent basis.

In claim 9, "said step of coating" has no antecedent basis. In addition, "low refractive index" further renders the claim indefinite because "low" is a relative term and there's no basis to ascertain the metes and bounds that constitutes "low" refractive index.

In claim 11, "said step of coating" has no antecedent basis.

In claim 13, "said step of coating" has no antecedent basis.

In claim 14, "said step of providing" has no antecedent basis.

In claim 15, "the step of dispersing" has no antecedent basis. In addition, "the" on line 2 should be "a".

3. In claim 16, "the step of dispersing" and "said polymethylmethacrylate" have no antecedent basis.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 of U.S. Patent No. 6,586,096. Although the conflicting claims are not identical, they are not patentably distinct from each other because they essentially claim the same subject matter. The only difference is that the referenced claim 1 recites broadly "a nanoparticulate material" as opposed to the "core/shell nanoparticulate material" of the instant claim. However, the broad "nanoparticulate material" encompasses the specific "core/shell" nanoparticulate material of the instant claim 1. One having ordinary skill in the art would have found it obvious to utilize a core/shell or coated nanoparticulate material as long as the coating material of the nanoparticulate material does not violate the optical vector relationship requirement. One of the motivations would have been cost reduction; for example, if silica is more expensive than calcium carbonate but silica is required to satisfy the optical vector relationship, then instead of using solid silica nanoparticle, one can use silica-coated calcium carbonate; that way, the cost can be reduced for using cheaper material without altering the optical properties of the product.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Border et al (U.S. Patent No. 6,586,096).

The only difference between instant claim 1 and claim 1 of the reference is that the claim 1 of the reference recites broadly “a nanoparticulate material” as opposed to the “core/shell nanoparticulate material” of the instant claim. However, the broad “nanoparticulate material” encompasses the specific “core/shell” nanoparticulate material of the instant claim 1. One having ordinary skill in the art would have found it obvious to utilize a core/shell or coated nanoparticulate material as long as the coating material of the nanoparticulate material does not violate the optical vector relationship requirement. One of the motivations would have been cost reduction; for example, if substance A is more expensive than substance B but A is required to satisfy the claimed optical relationship, then instead of using nanoparticle of pure A, one skill in the art would be motivated to substitute particle A with A-coated-B particle; that way, the cost can be reduced because A-coated B is less expensive than pure A; however, the optical properties of the product are preserved because substance A covers the surface of the nanoparticulate material and thus optically functions as a particle comprising all A substance. Another motivation would have been weight reduction. For example if substance A is heavier than substance B but A is required to satisfy the claimed optical relationship; then it would have been more advantageous to utilize A-coated-B particulate material so that the weight of the final product can be reduced without altering the optical properties of the product.

8. The method claims 2-16 are incomplete and meaningless* such that they preclude a reasonable application of prior art rejection. However, it's foreseeable that once the method claims 2-16 are properly amended, they will be subject to the same obvious rejection as applied to the rejection of claim 1.

Drawings

9. The drawings are objected to because the writings in figures 3-6 are not uniform, some are typed while some are handwritten. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

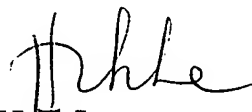
* See rejection under 112 paragraph above with regard to the subject matter of these claims.

10. References are cited as art of interest.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. T. Le whose telephone number is 571-272-1511. The examiner can normally be reached on 10:00 a.m. to 6:30 p.m., Mondays to Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


H. T. Le
Primary Examiner
Art Unit 1773